

REMARKS

Applicant appreciates the Examiner's thorough examination of the present application as evidenced by the Final Office Action of September 29, 2005 (hereinafter "Final Action"). In response, Applicant has amended independent Claims 1, 20, 37, and 54 to clarify that the screw press comprises a tunnel with a corresponding single worm assembly. Applicant submits that the cited reference fails to disclose or suggest the recitations of the independent claims as amended. Accordingly, Applicant submits that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

The Drawings

The Office Action further states that the structural arrangement of the mixer regions recited in Claims 15 - 17, 32 - 34, 49 - 51, and 66 - 68, the temperature control element recited in Claims 18, 35, 52, and 69, and the choke recited in Claims 19, 36, 53, and 70 must be shown in the drawings. (Final Action, page 2). With respect to the mixer regions of Claims 15 - 17, 32 - 34, 49 - 51, and 66 - 68, Applicant submits that these elements are shown in FIG. 2 as the screw press is shown as comprising multiple segments (note the vertical lines generally evenly spaced along the length of the screw press), which correspond to the various mixer regions. With respect to the choke element recited in Claims 19, 36, 53, and 70, Applicant submits that the discussion on page 5, lines 8 - 10 that a choke may be disposed at the discharge end of the press, i.e., the right end of FIG. 2, is sufficient to provide one skilled in the art that necessary understanding of the subject matter to be patented. Under 35 U.S.C. §113, an "applicant shall furnish a drawing where necessary for the understanding of the subject matter to be patented." Applicants similarly maintain that a drawing is not necessary for one skilled in the art to understand how a temperature control element may be used with a screw press as recited in Claims 128, 35, 52, and 69 when read in connection with the illustration of the screw press embodiments of FIG. 2.

Independent Claims 1, 20, 37, and 54 are Patentable

Independent Claims 1, 20, 37, and 54 stand rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 4,746,464 to Mange et al. (hereinafter "Mange").

Independent Claim 1 is directed to a rendering method of extracting liquids from a process material that comprises animal carcasses and/or bones. Independent Claim 1 has been amended to clarify that the screw press comprises a tunnel with a corresponding single worm assembly. Claim 1, as amended, now recites:

compressing the process material, which comprises animal carcasses and/or bones;
decompressing the process material;
mixing the process material; and
recompressing the process material, wherein the steps of compressing, decompressing, mixing, and recompressing are performed via a mechanical screw press comprising a tunnel and corresponding single worm assembly.
(Emphasis added).

Claims 20, 37, and 54 include similar recitations. Thus, according to independent Claim 1, the screw press comprises a tunnel with a corresponding single worm assembly. A single worm assembly means a single elongate element, which may be made in a modular or integral manner. The single worm rotates within a corresponding single tunnel member, which may be referred to as a cage. Some embodiments of the present invention stem from a realization that a multi-stage approach for sequentially pressing, mixing, and pressing target matter could be applied to the rendering industry. As noted on page 2, lines 11 - 23, such an approach had been found advantageous for certain uses, such as extraction of oil from seeds, but had been considered unsuitable for use in rendering screw presses because of a perceived risk of clogging of the rendering process material in the mixing portion of the worm assembly in the screw press. As noted on page 2, lines 26 - 28, Applicant has identified that, surprisingly, not only can a screw press be modified to include a mixing region in the worming assembly for use in the rendering industry, but such a press by result in a significantly improved yield of oil/fat from the mechanical press. Moreover, Applicant realized that this multi-stage approach may be carried out using a single worm assembly.

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Heretofore, there was a perceived risk of clogging of the rendering process in such an assembly.

In sharp contrast to the recitations of Claims 1, 20, 37, and 54, as amended, Mange discloses an apparatus that uses two adjacent worm assemblies, which can be seen, for example, as worms 2 and 2' in FIG. 2. The Mange reference highlights the notion that prior to Applicant's invention it was not thought possible to carry out a rendering process using a single worm assembly because of the perceived risk of clogging.


For at least the foregoing reasons, Applicants respectfully submit that independent Claims 1, 20, 37, and 54 are patentable over the cited reference and that Claims 2 - 19, 21 - 36, 38 - 53, and 55 - 70 are patentable at least per the patentability of independent Claims 1, 20, 37, and 54.

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CONCLUSION

In light of the above remarks, Applicant respectfully submits that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,

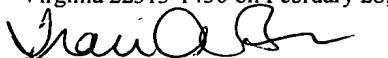


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